DETAILED ACTION

1. Claims 4, 5, 9, 10, 14, 15, 19, and 20 are pending in the instant application.

Response to Applicant's Amendment/Comment of October 15, 2007

2. The Applicant's argument, filed October 15, 2007, relies upon two points: 1) the prior art combination does not disclose a "phase difference recording means" and 2) the prior art combination does not disclose "shifting the first synchronism pattern detecting timing by the time difference recorded in the phase difference recording means".

It is conceded by the Examiner that the prior art reference Masumoto does not explicitly disclose 1 and 2 above. However, the Applicant fails to take into consideration the teachings presented by Hiramatsu which provide evidence of using a "difference recorder". The Examiner suggests that a prior art combination made by one having ordinary skill in the art in view of the disclosures of Masumoto and Hiramatsu could reasonably be expected to arrive at the claimed subject matter. Before any combination is attempted by one having skill in the art, the Applicant wholly fails to address the slightness of the differences between the claimed limitations and the prior art reference Masumoto. That is, the modification required beyond the disclosure of Masumoto to arrive at the claimed invention is only slight must be considered well within the expectation of success for one having ordinary skill in the art. Furthermore, Applicant fails to provide any secondary considerations of non-obviousness.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 4, 5, 9, 10, 14, 15, 19, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Masumoto et al (U.S. Pat. No. 5809094; hereafter “Masumoto”) in view of Hiramatsu (U.S. Pat. No. 6009131).

Regarding claim 1, Masumoto discloses a reception data synchronizing apparatus according to figure 1, for a synchronization to be obtained between reception data (input to “DATA BUFFER” 1) having a plurality of synchronism patterns and expectation data or “a predetermined offset word” as an expected value of the reception data (col. 4, lines 1-5), comprising: a phase recording means (5, 6) for recording second synchronism pattern detecting timing (6) at which a second of the plurality of the synchronism patterns is detected in the reception data and a first synchronism pattern detecting timing (5), as an initial one at which a first of the plurality of synchronism patterns is initially detected in the reception data (col. 4, lines 59-65; col. 5, lines 4-11); a timing generating means (8) for generating a timing for decision; and a collation and synchronism decision means (2) for collating the reception data with the expectation

data or "predetermined offset word" to decide whether or not the reception data is consistent in phase with the expectation data according to the timing for decision (col. 4, lines 1-5), wherein the timing for decision is the first synchronism pattern detecting timing before the collation and synchronism decision means collates the reception data with the expectation data (col. 5, lines 4-11), and wherein the timing for decision is a timing obtained by replacing the first synchronism pattern detecting timing with the second synchronism pattern detecting timing recorded in the phase recording means (5, 6), when the collation and synchronism decision means gives a decision for inconsistency in phase (col. 6, line 24 – col. 7, line 50). Masumoto discloses a synchronization apparatus wherein input data is correlated with a known "predetermined offset word" or expected synchronism pattern. Once a first synchronization timing is made according to a match with the "predetermined offset word" by the collation decision means (2), the timing is stored in the "MAIN SYNCRONIZATION DETECTION CIRCUIT" (5) as a first timing of the synchronism timing. Thereafter, when a second synchronization timing is determined by the decision means (2), it is stored in the "SUBORDINATE SYNCRONIZATION DETECTION CIRCUIT" (fig. 1, ref. 6; col. 5, lines 4-10) as a second timing of the synchronism timing. Finally, in the case that the first timing is determined to be incorrect, the timing generation means (8) of the apparatus switches from the first "MAIN" timing to the second "SUBORDINATE" timing (col. 6, lines 3-10).

Although Masumoto discloses a phase recording means recording each of the first and second timings, a "phase *difference* recording means" for recording a phase

timing difference between the first and second timings is not disclosed. Furthermore, Masumoto discloses switching between the first and second synchronization timings if a finding of phase inconsistency is made rather than shifting the first synchronism timing by the phase difference between the first and second timings. Hence, the difference between the prior art reference Masumoto and the instant application is only that the instant application records a "difference" between two timings while Masumoto records each of the timings individually. Thereafter, when an "inconsistency in phase" is determined (that is, the first timing is found to be incorrect) the prior are reference Masumoto replaces the recorded first timing with the recorded second timing while the instant application discloses shifting the first timing by the difference between the first and second timings.

Furthermore, Hiramatsu discloses an analogous synchronization apparatus wherein a frame timing difference between a transmitter and receiver is determined (col. 3, lines 34-37). The differences between the prior art reference Masumoto and the instant application being slight, only a small level of skill in the art would be required to modify the prior art reference Masumoto as suggested by Hiramatsu to gather *"phase difference"* information between two timings rather than two the two timings separately. Finally, the specification does not provide any secondary indications of non-obviousness such as (1) the invention's commercial success, (2) long felt but unresolved needs, (3) the failure of others, (4) skepticism by experts, (5) praise by others, (6) teaching away by others, (7) recognition of a problem, or (8) copying of the invention by competitors. Specifically, the specification of the instant application does

not disclose that the recording of a *"phase difference"* between two timings rather than the two timings separately provides and particular advantage or solves any particular problem beyond the prior art reference Matsumoto. Therefore, it would have been obvious to one having ordinary skill in the art at the time which the invention was made to determine a *"phase difference"* between the two timings of Matsumoto as suggested by Hiramatsu to arrive at the claimed invention because, the differences between the prior art reference Matsumoto and the claimed invention being very small, the analogous prior art references (i.e. Hiramatsu) evidencing alternative methods of recording phase timing differences, and the lack of secondary factors of non-obviousness in the instant application, it is within the level of skill of one having ordinary skill in the art to combine the prior art references Matsumoto and Hiramatsu to arrive at the claimed invention.

Regarding claims 5, 9, 10, 14, 15, 19, and 20, the limitations of the claims are disclosed by Matsumoto in view of Hiramatsu as applied in claim 4 above.

Allowable Subject Matter

5. No claims are allowed.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON M. PERILLA whose telephone number is (571)272-3055. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason M. Perilla/
March 31, 2008

/jmp/

/CHIEH M FAN/
Supervisory Patent Examiner, Art Unit 2611